This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-5.   (Canceled)

6.   (Previously Presented) A method of translating a path expression in an object oriented query to a relational database outer join, said path expression comprising a navigation path through a relationship in a schema, comprising: analyzing each path expression defined in each level of the object oriented query;

identifying each path expression which can be a candidate for a translation to an outer join;

ordering the path expressions starting with path expressions defined in a FROM clause, adding to the FROM clause path expressions, each path expression identified as a candidate for a translation to an outer join, and making the ordered path expressions as input to a select operator for each level of the object oriented query;

grouping the ordered path expressions sequentially based upon on a source-target dependency between ordered path expressions and based upon the identifications as a candidate for a translation to an outer join;

creating a quantifier for each path expression, said quantifier comprising a variable representing a table in a relational database;

replacing each grouped path expression with a corresponding quantifier and related table in a relational database;

performing optimization on grouped quantifiers, said optimization identifying quantifiers which can be a candidate for a translation to an inner join;

generating an outer join for each quantifier which remains after optimization a candidate for a translation to an outer join;

generating an inner join for each quantifier which remains after optimization a candidate for a translation to an inner join; and

completing a translation of the object oriented query to a relational query.

7.   (Canceled)

8.   (Previously Presented) The method of claim 6, wherein the optimization
identifies a quantifier as a candidate for a translation to an inner join if a corresponding path
expression is used in a FROM clause.

9.   (Previously Presented) The method of claim 6, wherein the optimization
identifies a quantifier as a candidate for a translation to an inner join if a LIKE, IN, or
BETWEEN operator exists in a WHERE clause containing a corresponding path expression.

10.   (Previously Presented)   The method of claim 6, wherein the optimization
identifies a quantifier as a candidate for a translation to an inner join if an EQUAL, LESS
THAN, GREATER THAN, LESS THAN OR EQUAL, GREATER THAN OR EQUAL, NOT
EQUAL, or NOT NULL operator exits in a WHERE clause.

11-15. (Canceled)